

U. S. DEPARTMENT OF AGRICULTURE - FOREST SERVICE
CALIFORNIA FOREST AND RANGE EXPERIMENT STATION
Division of Forest Insect Research

FOREST INSECT CONDITIONS
ELDORADO, NEVADA AND AMADOR COUNTIES
RECONNAISSANCE SURVEY
March 2-4, 1954

An inspection of forest insect damage in Eldorado, Nevada and Amador Counties was made by the author, accompanied by personnel of the California Division of Forestry, during the period March 2 through 4, 1954. This inspection was made at the request of Deputy State Forester T. F. Arvola. The inspection was organized by Deputy State Forester F. M. Dunow and Senior Technician H. Meyer of the North Sacramento District Office.

Placerville Area (Eldorado Co.)

On March 2, several infestations in the vicinity of Placerville were visited through the assistance of Service Forester William Maguire of the Camino State Division of Forestry Headquarters. The more important areas visited included the Finney property, located approximately five miles south of Placerville. This property was the site of a recent outbreak of the western pine beetle (Dendroctonus brevicornis Lec.) and the California five-spined engraver (Ips confusus (Lec.)), which killed approximately 35 ponderosa pine trees. The infested trees were treated by Mr. Finney under the guidance of Mr. Maguire. The method of control was to fell and burn the portions infested with bark beetles. The uninfested portions of the trees were then sprayed with a 5% solution of DDT in diesel oil. This was done in order to prevent the establishment of pine engraver broods in the green logs. Observations indicate that a good job of control was done. The cost of labor and material, excluding Mr. Finney's time, amounted to approximately \$200.

Another infestation of the western pine beetle and pine engravers is located on the Glover property approximately six miles southeast of Placerville. This outbreak resulted from inadequate slash disposal following logging last year. It is recommended that, in the future, slash be lopped and scattered in order to avoid similar infestations.

Approximately ten trees have faded this winter near a school in Placerville. Most of these trees have been top-killed by pine engravers. However, three ponderosa pine trees are currently infested with the western pine beetle. Due to their location in the middle of town and the consequent threat to trees on adjacent property, the trees which are infested with the western pine beetle should be treated if possible.

An unusual outbreak of the Douglas-fir engraver (Scolytus unispinosus Lec.) was examined on the Sheedy place in northwest Placerville. This insect is aggressively killing the Douglas-fir reproduction and saplings on approximately twenty acres of private land. The infestation is on a north slope with very few overstory trees. The infestation appeared to have resulted from a build-up of the engravers in slash.

created during recent clearing of Douglas-fir trees. The owner stated that he intends to cut and burn the infested trees prior to emergence of the beetles in April. It is believed that this action will control the infestation.

Auburn and Grass Valley Area (Placer and Nevada Counties)

On March 3, inspections of infestations between Auburn and Grass Valley were made. Ranger Brock of the Auburn Division of Forestry Station was contacted and he reported that there are currently more faded trees than in recent years.

Another outbreak of the western pine beetle and pine engravers was visited near Applegate on private land. This damage, like much of the rest, is traceable to inadequate slash disposal following recent logging. Again it was noted that the pine engravers were in flight, and new attacks were observed in green slash.

Ranger Knowlton of the Nevada City-California Division of Forestry Headquarters assisted in an inspection of damage on the Antonowitsch Ranch south of Grass Valley. This infestation of the western pine beetle and, to a lesser extent, pine engravers, is causing very heavy losses in second-growth ponderosa pine. A full discussion of this infestation is contained in a separate report by the writer, entitled: Forest Insect Conditions, Antonowitsch Ranch Infestation Area, Nevada County, California, March 1954, Reconnaissance Survey.

Another infestation of the western pine beetle and pine engravers involving approximately 160 second-growth pine trees, was examined on the North Star Mine property, two miles south of Grass Valley. This infestation is located at the edge of a meadow and is confined to approximately two acres. About one-quarter of the trees are currently infested with the western pine beetle. Control of this infestation will be undertaken by the owner.

Jackson Area (Amador County)

On March 4, Service Forester Ed Bailey of the Sutter Hill, California Division of Forestry Ranger Station, accompanied the writer during inspections of damage located north and east of Jackson. Numerous groups of dead second-growth ponderosa pine were seen surrounding River Pines. These infestations are attributed to inadequate slash disposal following logging last year. For the most part, the pine engravers are responsible for the damage.

Another notable infestation was observed, at a distance, from the road connecting Fiddletown and Dew Drop on Highway 88. This infestation is believed to lie in Section 12, T.7N., R.12E. Time did not permit a closer examination of the damage. However, it is likely that the western pine beetle and pine engravers are responsible for the killing of trees.

An interesting infestation of the silver spotted *Halisidota* (*Halisidota argentata* Pack.) in white fir was observed one mile west of the California Division of Forestry, Dew Drop Fire Control Station. The defoliation, caused by caterpillars of this insect, is located at present in the tops of white fir and all sizes of trees are damaged. A collection of immature caterpillars was made. The recent period of warm weather has caused the caterpillars to leave their webs and migrate

downward along the main trunk to reach other needles on which to feed. An appraisal survey of this infestation is advisable in order to determine the extent and the amount of damage. This is the second year in which the silver-spotted *Halisidota* has been observed in this vicinity, according to Mr. Bailey.

The Mt. Zion State Forest was visited enroute to Jackson. Twenty-four infested trees on the forest were felled and treated by the California Division of Forestry this winter. The mountain pine beetle, western pine beetle and pine engravers were the insects making up this infestation. It appeared that a thorough job of control had been accomplished, although green portions of the felled trees are now being attacked by pine engravers. These portions will be either peeled or sprayed with toxic oil prior to emergence of the adult beetles.

Another area of damage was observed at a distance of approximately six miles from Mt. Zion. This infestation appeared to lie south of Highway 88 at a point one or two miles east of Pioneer Station. A closer examination was not made, but it is possible that much of the damage was caused by fire.

Other infestations which were reported during the trip, but which were not examined, include the following: (1) An infestation in pine plantations at Plummer Ridge and Five Corners; (2) white-fir sawfly reported by Al Herbert, Forester, Stockton Lumber and Box Company. This infestation is located in Sections 11, 12, 13 and 14, T.14N., R.13E., near Brushy Springs and Chipmunk Ridge. It is reported to have increased from 400 to 7,000 acres last year; (3) also reported was a migration of caterpillars of the silver-spotted *Halisidota* across Highway 50, east of Pollock Pines, on May 25, 1953. Four adult moths were reared from specimens submitted to the Berkeley Laboratory by Mr. Maguire. An inspection of this locality is desirable in view of the infestation which has occurred west of Dew Drop; (4) an infestation in ponderosa pine was reported near North Bloomfield by Mr. Knowlton. Presumably the western pine beetle and pine engravers are responsible for this damage; (5) Mr. Knowlton also reported a similar infestation on the southeast slope of Bunker Hill in S.29, T.17N., R.8E.

RECOMMENDATIONS:

Infestations, like those described above, are prevalent this spring in the Sierra-Nevada foothill area and damage is considerably greater than in recent years. Much of the damage is caused by pine engravers. Direct control of pine engravers in standing trees is difficult. The most satisfactory means of dealing with the problem is to educate owners and operators to lop and scatter or otherwise treat slash created during winter and spring. Large reductions of pine engraver populations occur in the spring if there is no suitable slash in which the beetles can breed.

Within a short time, control action will have been completed to suppress the following infestations which are described above. No surveys of these infestations are required until next winter, at which time the results of control work should be determined.

1. Placerville area: Finney property (western pine beetle and pine engravers) and the Sheedy property (Douglas-fir engraver).

2. Auburn and Grass Valley area: Antonowitsch Ranch or Osborne Hill (western pine beetle and pine engravers) and North Star Mine (western pine beetle and pine engravers).

3. Jackson area: Mt. Zion State Forest (western pine beetle, pine engravers and mountain pine beetle).

Control of several trees infested with the western pine beetle at the new school-ground within Placerville is recommended. The cost of this work is negligible if done now, and may well prevent severe damage to trees on adjacent property.

In order to detect changes in trends, the following infestations should be kept under surveillance:

1. Placerville area: Glover property (western pine beetle and pine engraver).

2. Auburn-Grass Valley Area: Applegate (western pine beetle and pine engravers).

3. Jackson area: River Pines (pine engravers and some western pine beetle).

Very little is known about the following infestations, which should be reconnoitered to determine cause, insect species, number of infested trees, and ownership:

1. Jackson area:

a. Near Pioneer Station (damage appears due to fire, pine engravers and possibly western pine beetle).

b. South of road between Fiddletown and Dew Drop (damage appears typical of pine engravers and western pine beetle).

Defoliation of white fir by the silver-spotted *Halisidota* near Dew Drop is of considerable interest. Outbreaks of this insect occur only periodically. While they are not apt to kill the host, they can destroy the value of trees grown for Christmas-tree trade. An appraisal survey of this infestation will be made this spring by the Division of Forest Insect Research, in cooperation with the California Division of Forestry.

Berkeley, California
March 23, 1954

M. M. Furniss
Forester